CLAIMS:

1. Electronic ballast for operating a gas discharge lamp, comprising:

- a switch-mode power supply (SMPS) circuit for supplying power to the discharge lamp, said switch-mode power supply circuit comprising a half- or full-bridge commutating forward converter with at least a rail line for supplying a rail voltage, a first switching element (Q1), a second switching element (Q2), and an output node between said switching elements for supplying current to the lamp;

- a current-determining circuit for providing a signal representative of the converter current;

wherein the current-determining circuit comprises a first current sensing circuit for sensing the current in a first position between the rail and the output node and a second current sensing circuit for sensing the current in a second position between the output node and ground.

2. Electronic ballast according to claim 1, wherein the first sensing circuit comprises a first current transformer having a primary winding connected to said first position and the second sensing circuit comprises a second current transformer having a primary winding connected to said second position, the secondary windings of the first and second current transformers being connected in series for providing a combined signal representative of the converter current.

3. Electronic ballast according to claim 1 or 2, comprising a gate driving circuit connected to the gates of the first switching element and the second switching element and to the current-determining circuit for controlling the switching of the switching elements on the basis of said signal representative of the converter current.

4. Device for determining the current supplied by a commutating forward converter to a discharge lamp, which converter can be connected to a rail line for supplying a rail voltage and comprises a first switching element, a second switching element, and an output node between said switching elements for supplying said current to the discharge

lamp, the device comprising a first current sensing circuit for sensing the current in a first position between the rail and the output node and a second current sensing circuit for sensing the current in a second position between the output node and ground.

5. Device according to claim 4, wherein the first sensing circuit comprises a first current transformer having a primary winding connected to said first position and the second sense circuit comprises a second current transformer having a primary winding connected to said second position, the secondary windings of the first and second current transformers being connected in series for providing a combined signal representative of the converter current.

6. Method of determining the current supplied by a commutating forward converter to a gas discharge lamp, the converter including at least a rail line for supplying a rail voltage, a first switching element, a second switching element, and an output node between said switching elements for supplying current to the lamp, the method comprising the steps of:

sensing the current in the converter in a first position between the rail line and the output node and providing a first output signal;

sensing the current in the converter in a second position between the output node and ground and providing a second output signal;

adding the first and second output signals so as to provide a third output signal representative of the converter current.

7. Method according to claim 6, wherein the first signal is the current measured in the first position, the second signal is the current measured in the second position, and the third signal is the sum of the current measured in the first position and the simultaneously measured current in the second position.

8. Method according to any of claims 6 or 7, wherein the electronic ballast according to any of claims 1-3 and/or the device according to any of claims 4-5 is applied.